

FLIGHT SUMMARY REPORT

Flight Number: 97-006-01
Calendar/Julian Date: 15 June 1997 • 166
Sensor Package: Wild-Heerbrugg RC-30
Area(s) Covered: Mojave

Investigator(s): Stine, USGS

Aircraft #: 798
Department of Energy
B200 Kingair

SENSOR DATA

Accession #: 05193
Sensor ID #: 017
Sensor Type: RC-30
Focal Length: 6"
152.75 mm
Film Type: Aerochrome MS
2448
Filtration: HF3 + 2.2 AV
Spectral Band: 420-700 nm
f Stop: Variable
Shutter Speed: Variable
of Frames: 370
% Overlap: 60
Quality: Excellent
Remarks:

Airborne Science and Applications Program

The Airborne Science Branch at NASA's Dryden Flight Research Center, Edwards, California, operates two ER-2 high altitude aircraft in support of NASA earth science research. The ER-2s are used as readily deployable high altitude sensor platforms to collect remote sensing and in situ data on earth resources, celestial phenomena, atmospheric dynamics, and oceanic processes. Additionally, these aircraft are used for electronic sensor research and development and satellite investigative support.

The ER-2s are flown from various deployment sites in support of scientific research sponsored by NASA and other federal, state, university, and industry investigators. Data are collected from deployment sites in Kansas, Texas, Virginia, Florida, and Alaska. Cooperative international scientific projects have deployed the aircraft to sites in Great Britain, Australia, Chile, and Norway.

Photographic and digital imaging sensors are flown aboard the ER-2s in support of research objectives defined by the sponsoring investigators. High resolution mapping cameras and digital multispectral imaging sensors are utilized in a variety of configurations in the ER-2s' four pressurized experiment compartments. The following provides a description of the digital multispectral sensor(s) and camera(s) used for data collection during this flight.

Department of Energy Remote Sensing Laboratory

The NASA Airborne Science and Applications Program at Ames Research Center contracted with the Department of Energy Remote Sensing Laboratory (RSL) in Las Vegas, Nevada to fly the RSL Multispectral Scanner (MSS) and the NASA Thermal Infrared Multispectral Scanner (TIMS) over the desert southwest. The scanners were flown on the DOE Cessna Citation.

The Cessna Citation is a low and medium altitude, moderate speed aircraft. It can operate from 4,000 to 35,000 feet above sea level at speeds between 135 and 225 knots. There are two instrument ports in the aircraft. The RSL 1268 Multispectral Scanner was mounted over the aft port and the NASA Thermal Infrared Multispectral Scanner was mounted over the forward port.

Camera Systems

Various camera systems and films are used for photographic data collection. Film types include high definition color infrared, natural color, and black and white emulsions. Available photographic systems are as follows:

- Wild-Heerbrugg RC-10/RC-30 metric mapping camera
 - 9 x 9 inch film format
 - 6 inch focal length lens provides area coverage of 16 x 16 nautical miles from 65,000 feet
 - 12 inch focal length lens provides area coverage of 8 x 8 nautical miles from 65,000 feet
- Hycon HR-732 large scale mapping camera
 - 9 x 18 inch film format

- 24 inch focal length lens provides area coverage of 4 x 8 nautical miles from 65,000 feet
- IRIS II Panoramic camera
 - 4.5 x 34.7 inch film format
 - 24 inch focal length lens
 - 90 degree field of view provides area coverage of 2 x 21.4 nautical miles from 65,000 feet

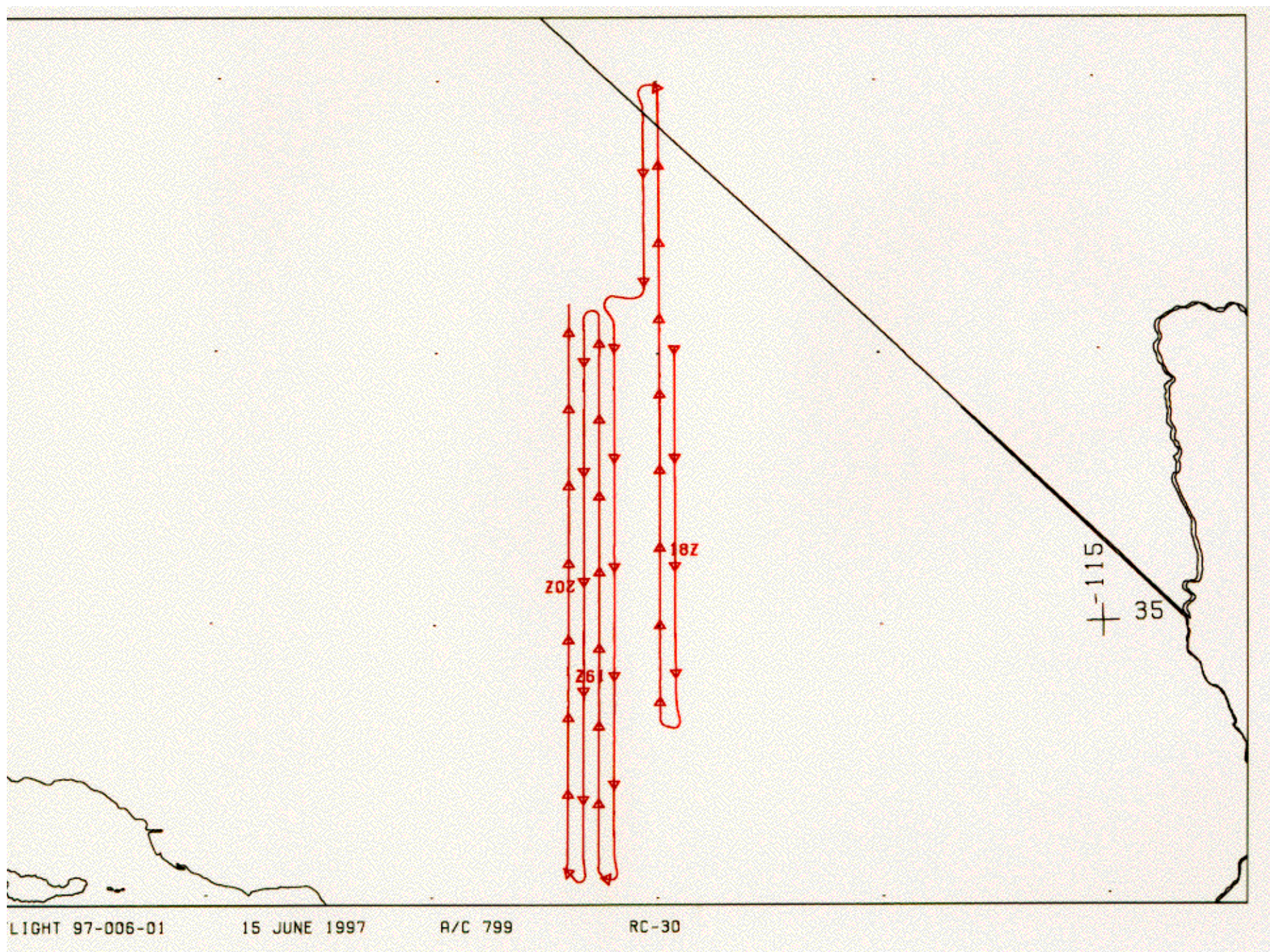
The U.S. Geological Survey's EROS Data Center at Sioux Falls, South Dakota serves as the archive and product distribution facility for NASA-Ames aircraft acquired photographic and digital imagery. For information regarding photography and digital data (including areas of coverage, products, and product costs) contact EROS Data Center, Customer Services, Sioux Falls, South Dakota 57198 (Telephone: 605-594-6151).

Information on data tape format, logical record format, and scanner calibration data may be obtained from the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: 650-604-6252).

CAMERA FLIGHT LINE DATA
FLIGHT NO. 97-006-01

Accession # 05193
Sensor # 017

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude, MGL feet/meters	Cloud Cover/Remarks
				START	END		
700	10	1	0001-0031	17:30:30	17:41:06	21510/6556	30% cumulus (frame 0005); 10-30% cumulus (frames 0016-0031)
700	11	1	0032-0099	17:51:33	18:26:21	21504/6554	Minor-60% cirrus and cumulus (frames 0032-0071); minor-20% cirrus and cumulus (frames 0076-0082); 10-30% cumulus (frames 0096-0099)
700	12	1	0100-0105	18:34:44	18:36:31	21600/6584	10-20% cumulus (frames 0100-0103)
700	14	1	0106-0165	18:46:39	19:06:25	21575/6576	10-20% cumulus (frames 0113-0119); minor-10% cumulus (frames 0123-0129 and 0134-0140); 10-20% cumulus (frames 0144-0165)
700	15	1	0166-0231	19:12:57	19:45:46	21547/6568	Minor-30% cumulus (frames 0166-0217); minor-20% cumulus (frames 0229-0231)
700	16	1	0232-0299	19:49:28	20:11:51	21581/6578	10% cumulus (frames 0240 and 0254-0256); minor-20% cumulus (frames 0264-0299)
700	17	1	0300-0370	20:17:05	20:50:07	21652/6600	Minor-20% cumulus (frames 0300-0316 and 0358-0366); minor-30% cumulus (frames 0321-0340); 10% cumulus (frames 0346-0350, 0354-0355, and 0369-0370)

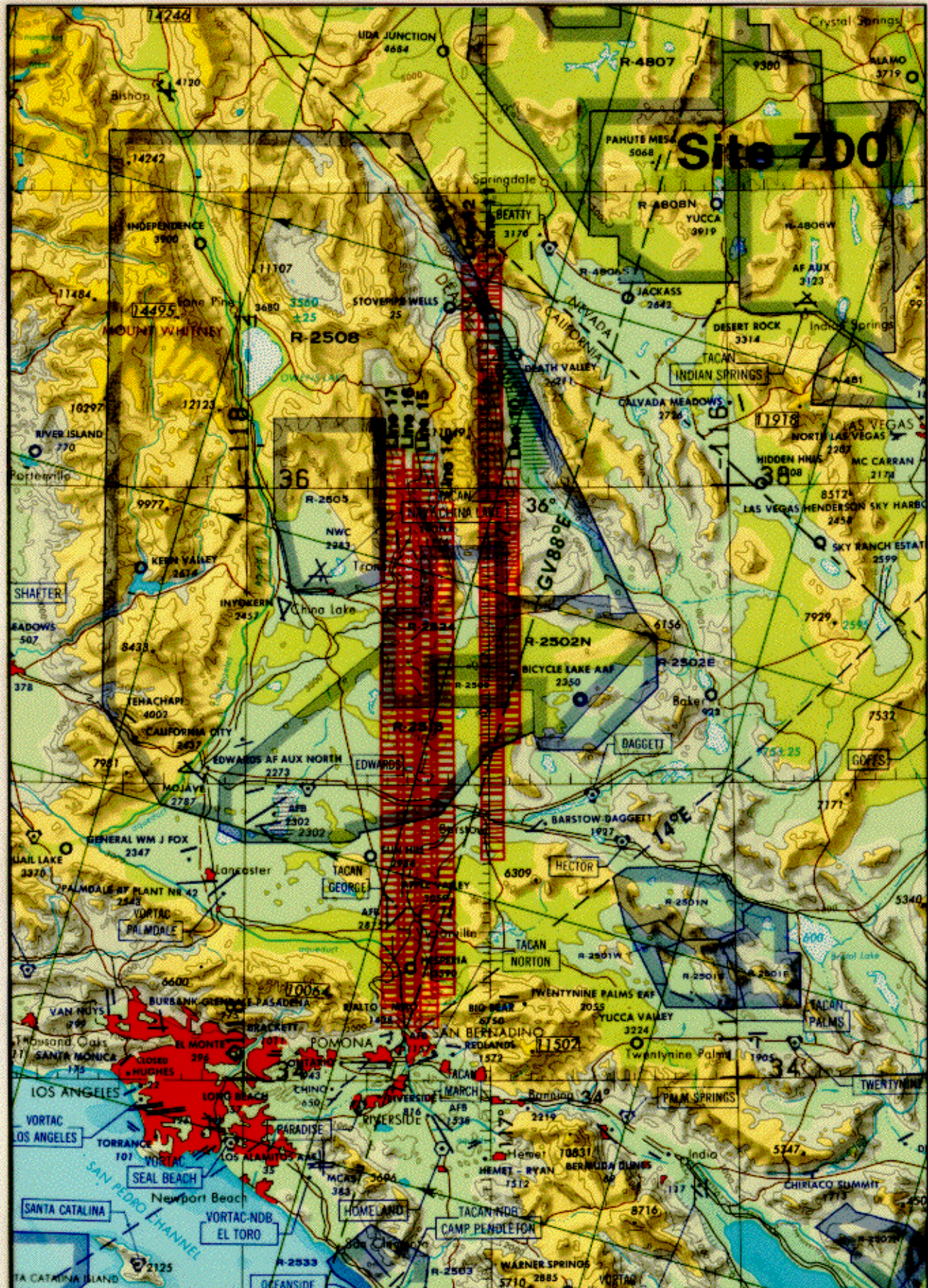


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A/C 799

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ROLL#05193

RC-30

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